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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/509,669 | 04/04/2000 | AKIHIRO MURATA | 1058895 | 7794 |

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EXAMINER

AMARI, ALESSANDRO V

ART UNIT PAPER NUMBER

2872

DATE MAILED: 02/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/509,669

Applicant(s)

MURATA ET AL.

Examiner

Amari, Alessandro V.

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/19/01 & 11/26/01.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-18 stand rejected under 35 U.S.C. 102(b) as being anticipated by Forrest et al. U.S. Patent 4,756,590.

In regard to claim 1, Forrest et al. discloses (see Figure 1) an optical module comprising a mounting member (11) having a principal surface (21), an interconnect (17) formed on said mounting member and an optical element (13) mounted on said principal surface and electrically connected to said interconnect wherein said mounting member is an optical waveguide for guiding light emitted from said optical element or light admitted to said optical element as described in column 2, lines 58-59.

In regard to claim 2, Forrest et al. discloses a light-admitting aperture or light-emitting aperture of said optical element is disposed opposing said principal surface as described in column 2, lines 30-31 and 48-51 and as shown in Figure 1.

In regard to claim 3, Forrest et al. discloses (see Figure 1) a light-reflecting member (15) provided on said optical waveguide and wherein light is transmitted between said optical element and said optical waveguide through said light-reflecting member as illustrated in Figure 1.

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In regard to claim 4, Forrest et al. discloses (see Figure 1) an optical module comprising an optical element (13) for emitting or admitting light and an optical waveguide (11) having a principal surface (21) with said optical element mounted on said principal surface, for guiding light emitted from said optical element or light admitted to said optical element as described in column 2, lines 30-31 and 48-51.

In regard to claim 5, Forrest et al. discloses (see Figure 1) said optical element and said optical waveguide are fixed with an adhesive member having light transmitting characteristics interposed between said optical element and said optical waveguide in such a way that the position of emission or admission of light of said optical element opposes said optical waveguide as illustrated in Figure 1 and subjected to bare chip mounting as described in column 2, lines 43-45.

In regard to claim 6, Forrest et al. discloses that the optical waveguide has a modifying portion (15) whereby the direction of progress of said light is changed and wherein said optical element is positioned to overlie said modifying portion as illustrated in Figure 1.

In regard to claims 7, 8 and 9, Forrest et al. discloses (see Figure 4) that a semiconductor element (16) is further mounted on said principal surface in addition to said optical element as described in column 4, lines 52-56 and wherein said optical element and said semiconductor element are integrally sealed with a resin (see element 18 in Figure 3) as described in column 3, lines 33-38.

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In regard to claims 10, 11 and 12, Forrest et al. discloses that said resin has light blocking characteristics as is inherently shown in Figure 3 and as described in column 3, lines 33-34.

In regard to claims 13, 14 and 15, Forrest et al. discloses that said semiconductor element has a function of driving said optical element as is shown in Figure 4.

In regard to claim 16, Forrest et al. discloses a circuit laminated directly on said principal surface as described in column 2, lines 47-48.

In regard to claim 17, Forrest et al. discloses (see Figure 1) an optical module comprising an optical element (13) and a mounting member (11) which has the function of an optical waveguide for guiding light emitted from said optical element or light admitted to said optical element and is electrically connected to said optical element or a semiconductor element (16) associated with said optical element as described in column 2, lines 50-58 and column 3, lines 10-13.

In regard to claim 18, Forrest et al. discloses (see Figure 1) an optical module comprising a mounting member (11) having a principal surface (21) and a lateral surface (15) and an optical element (13) mounted on said principal surface wherein said mounting member has a function of an optical waveguide and an optical input/output terminal for said optical waveguide is provided on said lateral surface as described in column 2, lines 58-59 and as shown in Figure 1.

Response to Arguments

2. The applicant argues that Forrest does not disclose a mounting member entirely made of material having a property of transmitting light and further that Forrest discloses a mounting member in which an optical fiber is inserted. However, the applicant is directed to Figure 1, which illustrates the mounting member (11) made of entirely the same material as illustrated by the hatching. Further, the specification states that the mounting member is made of a single material – silicon (see column 2, line 22). As illustrated in Figure 1 by the light path (24) the mounting member does have a property of transmitting light; since, the mounting member is entirely of the same material this property inherently must be throughout the entire structure. As such, the applicants arguments filed December 19, 2001 have been fully considered but are found non-persuasive.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (703) 306-0533. The examiner can normally be reached on Monday-Friday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703) 308-1687. The fax phone numbers for the organization where this application is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

ava DV4
August 22, 2001



Cassandra Spyrou
Supervisory Patent Examiner
Technology Center 2800